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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/666,953

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Qinfang Sun

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EXAMINER

HOM, SHICK C

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

06/17/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/666,953	<b>Applicant(s)</b> SUN ET AL.	
	<b>Examiner</b> SHICK C. HOM	<b>Art Unit</b> 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-11,14-18,21,22 and 25-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-11,14-18,21,22 and 25-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments with respect to claims 1-11, 14-18, 21-22, and 25-39 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 112***

2. Claims 1-2, 4-11, 14-18, 21-22, and 25-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 line 10 and claims 21, 25 line 11, which recite "wherein the phase difference is calculated by computing the cross correlation of each of the at least two training symbols and computing the self correlation between the cross correlation values of two training symbols" is not clear because page 5 lines 8-21 as applicant argued recite ---the phase difference is estimated by computing the cross correlation of each received long symbol with the known long symbol and then computing the self correlation between the cross correlation values of each two neighboring long symbols--- do not appear to be the same limitations as claimed.

In claim 7 lines 7-9, claim 27 lines 6-7, claim 38 lines 8-9, and claim 39 lines 9-10 which recite classification determines a data rate for a portion of the packet; i.e. a field in the packet, containing information about the data rate for another field in the packet is not clear as to which data rate is being determined by the step of classifying packet, the data rate for a portion or a field in the packet or the data rate for the some other field in the packet or information about the data rate for some other field or what; further, page 8 lines 8-12 recite that classification of packet refers to merely determining the number of long symbols included in the packet it is not clear how determining the number of symbols in the packet equate to determines a data rate for a portion of the packet; i.e. a field in the packet as in claims 7, 27, 38, 39. In claim 22 line 8 which recite "determines a data range" is not clear as to whether it is reciting ---determines a data rate--- as recited in claim 7, 22, 26-27, 38-39.

Claims 2, 4-6, 8-11, 14-18, and 28-37 are rejected under 35 U.S.C. 112, second paragraph because they depend from rejected claims 1, 7, and 27, respectively.

***Claim Rejections - 35 USC § 103***

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 22 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gardner et al. (6,707,856) in view of Dolle et al. (6,674,817).

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Regarding claims 22 and 26:

Gardner et al. disclose a method of characterizing a packet sent over a wireless channel comprising:

receiving a plurality of training symbols sent for the purpose of facilitating channel estimation; detecting a phase transition between at least two of the training symbols (col. 2 lines 38-51 recite receiving the first and second set of training symbols, the decoder that obtains the phase differences between symbols of the second and first set of training symbols, and the control processor that determines the communication information based on the phase differences); and

classifying the packet based on the detected phase transition (col. 4 lines 30-56 recite identifying the burst types based on the training symbols clearly anticipate classifying the packet based on the transition as claimed).

Gardner et al. disclose all the subject matter of the claimed invention with the exception of wherein classification determines a data rate for a portion of the packet as in claims 22 and 26.

Dolle et al. from the same or similar fields of endeavor teach that it is known to provide wherein classification determines a data rate for a portion of the packet (col. 4 lines

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5-8 recite distinguishing different types of data bursts based on the training sequences).

Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to provide wherein classification determines a data rate for a portion of the packet as taught by Dolle et al. in the communications system of Gardner et al. The motivation for providing wherein classification determines a data rate for a portion of the packet as taught by Dolle et al. in the communication system of Gardner et al. being that it provides the desirable added feature of classifying incoming packets to provide different types of data such as to provide quality of service and more efficiency for the system by avoiding the waste of network resources.

#### ***Allowable Subject Matter***

5. Claims 1-2, 4-11, 14-18, 21, 25, and 27-39 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

#### ***Conclusion***

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6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Thomson et al. disclose a decoding system and method for digital communications.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHICK C. HOM whose telephone number is (571)272-3173. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pham Chi can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chi H Pham/  
Supervisory Patent  
Examiner, Art Unit 2616  
6/13/08

SH